Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

Claims 1-9 (canceled)

Claim 10 (new) A method for diagnosing endometrial cancer in an endometrial tissue sample comprising:

obtaining a gene expression profile from the endometrial tissue sample wherein expression of the following genes is measured: KIAA0367, KIAA0119, platelet activating factor acetylhydrolase 1B gamma-subunit, UDP-galactose transporter related ioszyme, HMG-1 and Lamin B; and

identifying the sample as being cancerous if KIAA0367 expression is below background and KIAA0119, platelet activating factor acetylhydrolase 1B gamma-subunit, UDP-galactose transporter related ioszyme, HMG-1 and Lamin B expression is above background.

Claim 11 (new) A method of diagnosing endometrial adenocarcinoma in a first endometrial sample comprising:

measuring the gene expression in the first endometrial sample of each of the following genes: MIF, cyclin A1, MRG1, HOX1, Alpha 2 collagen type VI, Adducin, Cyclin B and PKC zeta;

comparing the amount of expression of each gene in the first endometrial sample to the amount of expression of the same gene in a second endometrial sample from normal endometrium; and

identifying the first endometrial sample as being endometrial adenocarcinoma if MIF, cyclin A1, cyclin B1 and PKC zeta are expressed at a higher level in the first endometrial sample than in the second endometrial sample and MRG1, HOX1, Alpha 2

collagen type VI and Adducin are expressed at a lower level in the first endometrial sample than in the second endometrial sample.

Claim 12 (new) A method of diagnosing endometrial clear cell carcinoma in a first endometrial sample comprising:

measuring the amount of gene expression in the first endometrial sample of each of the following genes: calponin, caldesmon, keratin K17, ESE-1b, HMG1, LAMB3, laminin SB3, osteopontin, and decorin;

comparing the amount of expression of each gene in the first endometrial sample to the amount of expression of the same gene in a second endometrial sample from normal endometrium; and

identifying the first endometrial sample as being clear cell carcinoma if keratin K17, ESE-1b, HMG1, LAMB3, laminin SB3 and osteopontin are expressed at a higher level in the first endometrial tissue sample than in the second endometrial sample and calponin, caldesmon and decorin are expressed at a lower level in the first endometrial sample than in the second endometrial sample.